

Layer (type)	Output Shape	Param #
input_1 (InputLayer)	(None, 1)	0
lambda_1 (Lambda)	(None, 512)	0
dense_1 (Dense)	(None, 128)	65664
dropout_1 (Dropout)	(None, 128)	0
dense_2 (Dense)	(None, 1)	129
Total params: 65,793		
Trainable params: 65,793		
Non-trainable params: 0		

Train on 60000 samples, validate on 10000 samples

Epoch 1/20  
60000/60000 [=====] - 114s 2ms/step - loss: 0.3863 - acc: 0.8262 - val\_loss: 0.3602 - val\_acc: 0.8371  
Epoch 2/20  
60000/60000 [=====] - 111s 2ms/step - loss: 0.3565 - acc: 0.8412 - val\_loss: 0.3472 - val\_acc: 0.8481  
Epoch 3/20  
60000/60000 [=====] - 112s 2ms/step - loss: 0.3470 - acc: 0.8454 - val\_loss: 0.3411 - val\_acc: 0.8518  
Epoch 4/20  
60000/60000 [=====] - 112s 2ms/step - loss: 0.3400 - acc: 0.8493 - val\_loss: 0.3367 - val\_acc: 0.8547  
Epoch 5/20  
60000/60000 [=====] - 112s 2ms/step - loss: 0.3345 - acc: 0.8535 - val\_loss: 0.3354 - val\_acc: 0.8530  
Epoch 6/20  
60000/60000 [=====] - 111s 2ms/step - loss: 0.3283 - acc: 0.8567 - val\_loss: 0.3444 - val\_acc: 0.8483  
Epoch 7/20  
60000/60000 [=====] - 116s 2ms/step - loss: 0.3228 - acc: 0.8590 - val\_loss: 0.3319 - val\_acc: 0.8567  
Epoch 8/20  
60000/60000 [=====] - 116s 2ms/step - loss: 0.3188 - acc: 0.8615 - val\_loss: 0.3284 - val\_acc: 0.8583  
Epoch 9/20  
60000/60000 [=====] - 132s 2ms/step - loss: 0.3143 - acc: 0.8646 - val\_loss: 0.3281 - val\_acc: 0.8577  
Epoch 10/20  
60000/60000 [=====] - 125s 2ms/step - loss: 0.3101 - acc: 0.8665 - val\_loss: 0.3229 - val\_acc: 0.8621  
Epoch 11/20  
60000/60000 [=====] - 126s 2ms/step - loss: 0.3063 - acc: 0.8694 - val\_loss: 0.3250 - val\_acc: 0.8613  
Epoch 12/20  
60000/60000 [=====] - 123s 2ms/step - loss: 0.3028 - acc: 0.8709 - val\_loss: 0.3230 - val\_acc: 0.8623  
Epoch 13/20  
60000/60000 [=====] - 119s 2ms/step - loss: 0.2992 - acc: 0.8712 - val\_loss: 0.3223 - val\_acc: 0.8599  
Epoch 14/20  
60000/60000 [=====] - 110s 2ms/step - loss: 0.2952 - acc: 0.8736 - val\_loss: 0.3262 - val\_acc: 0.8603  
Epoch 15/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.2914 - acc: 0.8757 - val\_loss: 0.3194 - val\_acc: 0.8643  
Epoch 16/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.2885 - acc: 0.8781 - val\_loss: 0.3184 - val\_acc: 0.8633  
Epoch 17/20  
60000/60000 [=====] - 108s 2ms/step - loss: 0.2846 - acc: 0.8794 - val\_loss: 0.3182 - val\_acc: 0.8634  
Epoch 18/20  
60000/60000 [=====] - 109s 2ms/step - loss: 0.2823 - acc: 0.8809 - val\_loss: 0.3218 - val\_acc: 0.8652  
Epoch 19/20  
60000/60000 [=====] - 109s 2ms/step - loss: 0.2787 - acc: 0.8813 - val\_loss: 0.3201 - val\_acc: 0.8641  
Epoch 20/20  
60000/60000 [=====] - 114s 2ms/step - loss: 0.2759 - acc: 0.8833 - val\_loss: 0.3174 - val\_acc: 0.8637

